CHICAGO
MEDICAL JOURNAL.

VOL. XXI.] SEPTEMBER, 1864. [No. 9.

ORIGINAL COMMUNICATIONS.

OBSERVATIONS ON "DISEASE."

By J. A. A.

Natura Sanat, Medicus Curat Morbos.

WHAT IS DISEASE?

Disease is a change of structure in parts, tissues, organs, or apparatuses of the system, varying them from the normal (physiologic) constitution.

This change may be in the ultimate molecules only, (at "imperceptible distances"). As the normal metamorphoses of the material parts of the body develop the physiologic actions, or "functions," so do the abnormal metamorphoses develop pathological actions, or "symptoms." But the distinction is quite arbitrary—for as the greater part of the wonderful processes involved in LIFE, occur noiselessly, imperceptibly, and unconsciously, so may those of disease take place without "symptoms" of modified function before death, or apparent variation of the "phenomena of perceptible distance" after death.

Normal metamorphosis of the material gives healthy life—abnormal metamorphosis gives disease.

An Idea to be Abandoned.

That disease ever consists in "perversion of function" without abnormal material change. The symptom "perversion of function" necessitates the presence of material change, visible or invisible, of the part involved—the remote cause of which may oftentimes be found in a distinct visible change in a more or less distant part, even when invisible in the organ whose function is perverted.

Whether the forces mainly impressing the body are "physical" or "vital," it is a plainly demonstrated natural law that their physiologic manifestation requires a physiologic material constitution. *Forces are never diseased!* Material often is.

Paine and the Homœopathists,

respectively, attempt discussion of disease philosophically, and their treatment practically, by imputing everything of disease and everything of remedy to *forces*, nothing to the material through which, only, forces can be manifested. The former (with all Vitalists or Solidists) discusses disease as a metaphysical question, and attacks it, as Milton makes the fallen angels attack their unfallen brothers of incorporeal essence, with very solid cannon of ponderous mass and huge calibre, filled to the muzzle with very palpable gunpowder; whereas the Homœopathist, more consistently, attenuates the material of his attack infinitesimally, seeking thereby to get nearer the ultimate force with which he can reinforce and strengthen the errant force of organization. Hence Paine rattles dry *properties*, like peas in a basket, and the Homœopathist talks about "*potencies*." *Par nobile fratrum.*

General Considerations.

"Out of the fluid," says the elegant and exact Gerber,* "comes the solid, the shapen; all the parts of an animal body were once fluid, they have all been formed from the blood; and after death they will revert to the fluid state again. Organic matter, itself engendered and developed under the influence

*Gerber's "General Anatomy, Text," p. 12.

of the vital force, forms with water a vivifying fluid of different kinds, either homogeneous and more or less consistent, or having numbers of extremely minute and regularly organized molecules mixed with it. This vivifying fluid has the faculty according to the circumstances in which it is placed, of coagulating or solidifying in different ways. The organic matter that is the most highly endowed with vitality separates in a state more or less highly organized, appropriately fashioned, and susceptible of life ever in conformity with the vitality and character of that which is around it, and with or without the solid elementary particles with which it is mingled; it then gradually acquires distinct and individual forms, which always bear appropriate relationship to the structures amidst which the separation takes place."

So far as Physiology can inform us, the "solid and the shapen" come only from the blood and the lymph, or rather the portal blood, the chyle, and the lymph, all ultimating in the formation of Blood, perfected by its final passage through the lungs, appearing in the aorta in its grade of highest vitality, or if you please, *capability* of highest vitality.

Abstractly,

we must recognize the *formative force*, a phrase which is one of the landmarks of our present ignorance, to be trenched upon and removed further and further, as knowledge rescues more and more of science from the uncultivated domain of the unknown. It is this force which determines the forms assumed by species and individuals. Resident in the germ, a material substance, unknown, perhaps forever incomprehensible in its essence, nevertheless we know that its developmental energy can never be fully manifested, or even manifested at all, without appropriate supply of appropriate material. Nay, the very germ itself may be wholly blighted by imperfection of the material, or its future development arrested, variously deflected, or *diseased*. Without material pabulum, it may remain quiescent for ages. The kernel of wheat from the wrappings of a mummy, exhibits this force when furnished the

material through which to operate, three thousand years after its fall from the parent stalk.

True, the phases of Force, Heat, Light, Chemical Affinity, etc., must be present, but these can only be evoked through the medium of matter arranged in peculiar forms, so that the proposition remains unchanged: without appropriate material there can be no manifestation of life—form or function.

With inappropriate material there must always be disease Nor is this a matter of merely speculative interest, as too many are disposed to imagine. Philosophically, it brings medicine into the domain of Physical Science; practically, it is hereby emancipated from the supremacy of visionary speculations and dogmas, mystery and charlatanry, into the freedom of a high and certain art. As there is seen something tangible to work upon, there is perceived something tangible to do.

Physiology,

rightly understood, educes order and simplicity from the apparent chaos of manifestations of disease. In its light we are enabled to see that the systematic tables of diseases, with all the involved and inextricably confused attempts at classification, so painfully elaborated by the Nosologists, have no foundation in Nature or fact. The doctrine of diseases as entities which still infects some of our best professional minds, is departing to desuetude. Without becoming believers in the "unity of disease," we can cease to be "Ontologists," substituting for each dogma the solid substratum of physiologic law.

The "Proximate Cause."

The earlier Morbid Anatomists referred the cause of disease to the part showing morbid change in the "phenomena of perceptible distance," that is, to the part which showed change in its color, density, form, etc., but the evidences of modern physiology show that this is a great error. The real change may have been produced in a remote part which, on *post-mortem*, shows not the slightest visual evidence of lesion. "Morbid Anatomy," so-called, is fruitful, mainly, in errors. It is subsidiary mainly to physiology, very little to pathology.

The essential changes of disease are molecular and cellular. The incidental—nay, *accidental*, changes are those which are perceptible on *post-mortem*.

The lungs may show "CONGESTION," but the *disease* be in the KIDNEYS!

Morbid Anatomy, so-called, might indicate that the subject died of Pneumonia, whereas, the real fact might be that he died of disease of the skin, the kidneys, the bowels, the brain or spinal cord!

It will never do to base treatment on such fantasies as these. The real cause of death may be in the food, the air, the water, the stomach, the intestines, the adjuvant glandular tissues, the kidneys, or remote organs. Briefly, the *effect* on particular organs, which the Morbid Anatomist points out, so triumphantly, as illustrating his skill in diagnosis, is a proof of nothing but *ignorance*. You might as well go to the graveyards, and vampire-like, dig up the bodies of the ancient dead and endeavor to show that each died of disease of the part which most speedily and completely showed decomposition.

Briefly, Morbid Anatomy, with its "beautiful illustrations," shows nothing, proves nothing, simply because the ultimate elements of diseases, like the ultimate changes of health, are to be found among molecules and cells, undiscoverable by aided or unaided vision, save in results.

The only approximation to certainty is gained by contrast of the physiological to the pathological. It is probable that the molecules and cells (inseparable in physiological relation,) develop in strict accordance with the conditions in which they are placed. In other words: The individual cell is the type of organic life, and in its changes every function of the most highly developed organization is expressed. To each there are definite conditions of existence in its typical form; that is to say, the cells developing the individuals of each type do so under certain circumstances, *change the conditions and the cells develop different forms, tending to the type of those normally developed under similar conditions.*

When the transformation is consistent with the usual *functions* of the part, it is little noticed but when inconsistent, we recognize disease. That which is the natural or healthy form in one being, developed in another by the equable operation of the same all-pervading laws, involves impairment and even dissolution. Thus the causes of one existence determine cessation of another.

"The Universal Cause
Acts not by partial but by general laws."

We fail accurately to draw the line between health and disease, definitions are at fault, because the differences are but phases of normal organic life. It is, therefore, fitting to view the phenomena of disease with a single, unprejudiced eye; not as the product of marvellous or miraculous causes; not as the means of revenge of wrathful deities, as anciently believed and, even now tacitly admitted by the more ignorant and credulous; not as essential mysteries, locked up forever with the unapproachable arcana of Creative Intelligence, and hence to be combated, if at all, by marvels and miracles, by appeasing charms, by specifics and perturbating methods, by strange influences and fortuitous appliances, but rather as the orderly effect of forces as subject to observation and discoverable as gravitation and affinity, acting upon matter as tangible to examination as the elements of inorganic being, and therefore to be controlled, through the insight which science affords, with as much certainty as we can regulate the reaction of physical agencies upon inanimate objects.

Medicine should no longer be considered *asinus portans mysteria*, but as an eagle, with powerful wing and keen eye, facing unblenchingly the sun of Modern Science.

"BIRD'S" TREATMENT OF PROLAPSUS UTERI.

By W. B. SLAYTER, M. D., of Chicago,

Graduate Royal College of Physicians of England, Royal College of Surgeons of London and Dublin. Late House-Surgeon of Westminster Hospital, London.

One of the most loathsome and troublesome diseases from which a woman can suffer, is Prolapsus Uteri. It not only causes pain and bodily suffering, but makes her life one of misery, and sometimes positively unbearable. Various plans of treatment have been pursued, but in the majority of cases are of no avail. Little can be done except to give temporary relief. The mode of treatment devised by Drs. Golding and Frederick Bird, of London, for the permanent relief of the disease, has been practiced with marked success by the profession in Europe, and deserves the careful consideration of the profession in this country.

The operation consists in returning the Uterus to its natural situation, and then cauterizing the upper part of the Vagina; it is performed in the following manner: The patient first having been placed fully under the influence of chloroform, and the Uterus returned to its natural situation; the walls of the Vagina are widely separated and protected by metal spatulas held by an assistant; a cautery iron having a cone shaped top about half an inch long, and bent at right angles with the handle, and which has been made red hot, is then carefully inserted into the vagina, and the upper part of the passage around the cervix uteri is gently canterized, forming an eschar about half an inch wide. A pledget of lint, well oiled, is then inserted, and the patient kept quiet in bed for two or three days. The slough comes away in a short time, the ulcerated surface heals up, and the cicatrix resulting, as is well known, rapidly contracts, and so prevents the Uterus again coming down.

This treatment is, of course, only applicable to those cases where there is no chance of future child-bearing for if the patient became pregnant it would seriously endanger her life, as it would be an impossibility for a child to pass the hard, dense cicatrix in the Vagina.

Many cases have been published in the British Medical Journals, in which the operation has been successfully employed, and several cases which have been under treatment at the Westminster Hospital, and the details of which I have published in the *London Lancet*, fully show the benefits resulting from it. The advantages of the operation are too palpable to require mentioning; it is, however, reasonable to suppose that if the cautery were applied too extensively, and without due caution, serious inflammation and its consequences might arise; but in all those cases which have come under my notice, no serious symptoms of any kind have arisen, and in from ten days to a fortnight the patients have been able to go about, and resume their occupations as usual, without the slightest inconvenience. I have seen several cases a considerable time after the operation had been performed, and they have had no return whatever of the Prolaps.

The two principal points in the operation, to be attended to are, 1st. To see that the walls of the Vagina are thoroughly protected before the cautery iron is introduced, and 2d. That the eschar is not more than half an inch wide, and does not implicate anything but the mucous membrane of the Vagina. The pain after the operation, as a rule, is slight, although in some cases it is considerable, but is readily controlled by the liberal administration of opiates.

In conclusion, I would call on the profession to give this operation their earnest consideration, and in those cases where other remedies have failed, to give it a trial, as I am convinced that in many well chosen cases they will be thoroughly satisfied with it.

PESSARIES.

By M. M. EATON, M. D., of Peoria.

Doubtless no physician, of any considerable experience in the treatment of females, is entirely satisfied with any pessary before the Medical public. Most of those now in use have their friends and advocates, though no one of them is all that is desired; and I think that every philanthropic, well educated physician has been annoyed because no better relief can be afforded to one of the most distressing, though common, complaints to which the female is liable—one so common that we are almost daily consulted about it—one giving rise, not only to suffering, but barrenness, which often so much disturbs conjugal felicity, viz., Prolapsus Uteri.

In order to treat successfully this complaint we must be conversant with its cause, the removal of which should be our first study. In Prolapsus Uteri, the strength of the vaginal walls, the broad and round ligaments, is disproportionate to the weight of the Uterus. This weakness is the result of irritation from various causes in most instances, though occasionally from want of, or entire absence of, irritation. Getting up too soon after confinement, while the vagina is relaxed and the womb heavy, is a frequent cause.

Now, in view of the above facts, it is clearly our duty to reinstate the Uterus *in situ*, retain it there, and strengthen the vaginal walls, while at the same time we support the abdominal viscera with suitable bandages and pads, so as to relieve the womb as much as possible of all superincumbent weight.

On the operation of replacing the organ I will not dwell, as it is generally an easy operation, soon effected by continuous, though gentle pressure on the os uteri with two fingers, having the patient in a recumbent posture, with the hips elevated.

When this is accomplished the patient should not rise for several days, during which time weak astringent washes should be used in the vagina, several times a day, with a rubber syringe, having the patient over a bed-pan the while.

This treatment would effect a cure of itself if long enough maintained, but as patients are restless and impatient of restraint, they will hardly submit to this confinement more than a few days, and as the vagina has not become strong enough to bear the weight of the womb, prolapsus is again the result. To remedy this, various contrivances have been invented to place in the vagina to support the Uterus, all of which, that I have seen or heard of, are to be objected to seriously, in that they simply alleviate but do not cure. Some distend the vagina making it weaker rather than stronger; others irritate the os uteri; others are cumbersome, and have to be removed and readjusted daily. Now, in view of all this, I can agree with Dr. Rigby and others, that these various pessaries have done more mischief than good. But a plan occurred to me some years ago that an instrument could be invented that would answer all the indications, and still liable to none of the objections I have enumerated. I accordingly submit to the Medical profession the following described instrument, hoping it may be found convenient to the physician and a comfort and means of cure to many afflicted daughters of Eve.

The instrument proper is pear-shaped, made of any convenient material, about one and a half inches in diameter, with a cavity, about one inch wide, passing through, and terminating below in an opening, half an inch wide. Around this orifice are inserted three standards which meet externally, and are fastened into a cross piece, placed transversely from before backwards, which divides into two pieces, before and behind, so as to surround the meatus urinarius and the anus, these uniting to form a handle or loop, to which is attached elastic straps passing upward and fastened to a waist band buckled above the hips.

This instrument can be worn indefinitely without removal,

as it does not interfere with defecation or micturition, or with the use of the small pipe of a female syringe, which we need, for several weeks, to continue the cool astringent washes. It does not distend the vagina, it holds the os uteri steady, and will not irritate it. Through the opening in the instrument in which the *Os* rests, the menstrua may be discharged. Hence it seems to me that by the use of this instrument and proper collateral treatment, this distressing malady may be speedily cured, so as to need no treatment whatever. More than this, I believe that this instrument will, after a while, effect a cure of itself unaided, as it keeps the womb *in situ*, and gives time for the vagina to become strong. The old stem-globe pessary only holds the womb up by pressing up between the os uteri and the walls of the vagina. The womb would not rest on it as it has been constructed, and when a dent has been made on the superior surface, it would not hold the womb directly, but simply holds the secretions, and necessitates its frequent removal. It also interferes, much more than my instrument, with defecation and urination; in fact, my instrument interferes seriously with nothing but copulation, which, by the way, it is well to prohibit.

CLINICAL LECTURES ON DISEASES OF THE EYE.

By E. L HOLMES, M. D., of Chicago,

Lecturer on Diseases of the Eye and Ear in Rush Medical College, and Surgeon of the Chicago Charitable Eye and Ear Infirmary.

THE LIDS.

GENTLEMEN:—Although the lids may be considered simply as organs of protection to the eye, and in themselves scarcely connected with the sense of sight, yet when they are diseased, parts of the eye, vital in importance in the act of seeing, are very liable to suffer. You have already seen many patients, in whom disease of the lids have produced either total or partial loss of vision.

The lids are quite complex in structure. First, there is a very delicate integument, richly supplied with nerves of sensation from the 5th pair. Beneath this is a stratum of cellular tissue, embedded in which are sweat and hair follicles. This layer covers the orbicularis, which is a thin band of muscular fibres, embracing nearly the whole width of the lids. The muscle is thickest near the free edge of the lids. Beneath the muscle is a layer of cellular tissue, quite rich in fat cells. This layer covers the tarsal cartilage, which is especially developed in the upper lid, and which gives firmness and support to it. The lining membrane of the lids has already been described. In the substance of the cartilages are embedded the meibomian glands, which may be seen, on everting the lid, as fine, yellow colored lines, arranged not unlike certain familiar fern leaves. The minute openings of these glands may be seen along the inner edge of the lids, by the presence of fine drops of secretion pressed out by the effort of turning the lid.

The cilia commence from hair follicles situated quite deep in the lids near the cartilage, and curve upward and forwards in the upper lid, and downward and forwards in the lower lid. They pass through the integument at the outer edge of the lid. At the side of each of the cilia are minute sebaceous follicles, which supply a substance to soften the cilia and the edge of the lids.

All these tissues should be well understood by you. It is important for you to examine, frequently, healthy lids of different individuals and different ages—to observe their thickness, the form of their edges, the relative position of the cilia, the number and size of the folds of skin upon the lids, the position of the puncta lachrymalia and also their movements, whether they close or open naturally in winking. By doing this frequently you will be able to detect at a glance any abnormal change.

The movements of the lids are influenced by two distinct nerves, a branch of the 3d pair supplying the levator muscle of the upper lid, and a branch of the 7th pair supplying the

orbicularis. A paralysis of the former causes an involuntary closure of the muscle, called ptosis; of the latter, an involuntary opening of the lids. Ordinary winking is not under the control of the will, and yet the will can suspend, for a period at least, the motions of the lids. There seems to be special power of the will over the contractions of the orbicularis, in keeping the lids closed.

The lids not only serve as a covering and protection of the eyes, but also assist in the performance of several important functions. By their motions they distribute the lubricating secretions of the conjunctiva and meibomian glands over the surface of the eye, and at the same time remove dust and undue collections of mucus, which may rest upon the cornea. By the motions of the lids also, the tears, in some way not in all respects well understood, are made to pass more readily into the lachrymal sack and nasal duct, than when the lids are at rest.

As it is impossible in a single lecture to describe minutely all the diseases peculiar to the lids, I shall simply draw your attention to some of the most important principles, which may guide you in the more extended study of the subject. It will be convenient to divide these diseases into three classes, those which are usually secondary to some other disease, as for instance, Trichiasis, Entropion, Ectropion, and Adhesions of the lids at the outer angle, all of which are particularly liable to follow chronic conjunctivitis; those tending to the formation of pus, as Simple Abscess, and Hordeolum; 3d, chronic disease of the sebaceous glandulæ.

Trichiasis is a displacement of the cilia, and is almost invariably produced by the atrophy of tissue, resulting from chronic conjunctivitis. It may also be caused by repeated attacks of inflammation of the sebaceous follicles, near the cilia. Wounds of the lids, involving a loss of tissue in the cartilage and conjunctiva, in healing will sometimes cause a contraction of the parts and turn some of the cilia against the globe. In rare instances, even where no disease is apparent, and where the

eyes in other respects seem normal, one or more cilia will be found growing from the inner edge of the lids, agasnst the cornea. Mere inspection will enable you in most cases to discover the presence of these misplaced cilia. Sometimes, however, the cilia are so fine and white that great care in an examination is required.

The treatment consists in the destruction of the cilia by introducing a needle covered with caustic, down to the follicle of each misplaced hair; in clipping off a portion of the outer tissue of the lid, near the cilia, the cicatrization of the wound being left to turn the cilia from the globe; and finally, in removing the tissue involving the follicles of the cilia, by making an incision parallel to the edge of the lid, down to the cartilage, and dissecting this strip, care being taken to remove all the follicles without injuring the cartilage. Simple evulsion of the cilia with forceps affords but a temporary relief.

Entropion is that condition in which the integument of the lid is turned against the globe. This unnatural position of the lid produces great irritation and pain, which, sooner or later, causes ulceration and final destruction of the cornea. The disease, in its usual form, is produced by spasmodic contractions of the orbicularis muscle, excited by the irritation accompanying conjunctivitis. The reason why some cases of conjunctivitis are attended with irritation and spasm, not in proportion to the apparent severity of the disease, is not easily explained. The under lid, in consequence of the want of firmness of its cartilage is especially liable to entropion.

The operation for this disease in its uncomplicated form is exceedingly simple, consisting merely in excising one or more pieces from the integument of the lid near its free edge. I usually leave the wound without stitches, to heal by granulation. The contraction produced by cicatrization restores the lid to its natural position. As soon as the wound has sufficiently healed, treatment should be directed to the primary disease. There is scarcely a minor operation in ophthalmic surgery attended so often with satisfactory results as this.

Care should be taken not to remove too much tissue, since the edge of the lid may thus be drawn too far from the globe. Whenever Entropion is complicated with Trichiasis the prognosis is generally less favorable. Although a suitable operation may much improve the condition of the eye, the hardened contracted edge of the lid will often remain a source of irritation.

Ectropion is a disease, usually of the lower lid, in which the conjunctiva is turned from the globe, and exposed to direct contact with the air. It is more frequently a serious disease than Entropion, and may be produced by several conditions of the lids. Total or partial paralysis of the orbicularis muscle may cause it, by permitting the lower lid to fall away by its own weight from the globe. The presence of granulations and hypertrophy of the conjunctiva, by separating the edges of the lid from the globe, gradually tends to produce it. The excoriations of the skin, and consequent loss of tissue and contractions, produced by the presence of abnormal discharges from the eye, is an occasional cause of the disease. The same effect is produced by certain wounds, burns, abscesses, and erysipelas.

The exposure of the conjunctiva and of the cornea to the air, the constant flow of tears upon the cheeks, caused not only by this exposure, but also by the eversion of the punctum, which prevents the tears from passing into the nasal duct, not only render this disease very annoying but, sooner or later, totally or partially destroy vision.

As a satisfactory discussion of the surgical treatment of this disease requires more space than we can at present give, we would refer the readers of the *Journal* to works general surgery as well as those on diseases of the eye.

Chronic Conjunctivitis produces, not unfrequently, by the presence of acrid discharges, excoriations of the edges of the lids at the outer angles. The denuded surfaces thus tend to unite, reducing the length of the palpebral fissure, The irritation of the primary disease, augmented by the abnormal

pressure of the contracted lids upon the globe, is increased by spasm of the orbicularis. This condition may be improved in connection with appropriate treatment directed to the primary disease, by making a horizontal incision through the thickness of the lids, at the external angle, thus restoring the palpebral fissure to its normal length. The insertion of two or three vertical stitches, embracing nearly the whole width of the orbicular muscle, will also assist in overcoming spasm and tendency to entropion. The stitches should be drawn quite tight and left to slough out.

Abscess of the lids, whether caused by the inflammation of the minute sebaceous follicles or otherwise, is of comparative little importance, since the tending is almost invariably to recovery without special treatment. And yet there are a few practical points for you to bear in mind. Simple abscess in or near the lids should be treated as abscess in other parts of the body. Hordeolum—sty—is merely suppurative inflammation of the sebaceous follicles. Although it generally requires scarcely any treatment, occasionally there is a long-continued and obstinate tendency to the formation of these abscesses—as in certain cases of repeated occurrence of boils, and treatment seems of little avail. In some of these obstinate cases the use of poultices applied to the lids for a few moments, several times a day, rubbing to the edges of the lids at night a little red precipitate ointment, gr. xvj to the ounce, will prove beneficial. The use of alkalies, in the form of Seidlitz powders, or Rochelle salts, sometimes seems to act favorable. It is well to remember that, now and then there are cases, in which the earliest symptoms are œdema of the conjunctiva, as well as of the lids, presenting the appearance of severe conjunctivitis, and still the disease may be a simple sty, the opening of which at once relieves the œdema. Of course the application of caustic astringents would be worse than useless.

There is another form of abscess, which you will occasionally observe, caused by obstruction and inflammation of the meibomian glands. Usually, however, the disease tends to

the formation of cystic tumors, which is of a very slow growth and is filled with an abnormal secretion of the glands.

The tumor may tend to grow at the expense of the tarsal cartilage and conjunctiva, thus forming an elevation upon the inner surface of the lid, or it may press outwards, the tumor appearing upon the outside of the lid. There is but little pain attending the growth of these tumors, although they occasionally become painful and suppurate.

The most reliable treatment consists in opening the tumor and removing as much of the cyst, with its contents, as possible. It may be necessary, sometimes, to destroy portions of the cyst that may remain, by introducing into the wound small portions of nitrate of silver.

Chronic Inflammation of the sebaceous follicles of the lids is quite a common and obstinate disease. It is characterized by the presence of a yellow, hardened secretion upon the edge of the lids, around the base of the cilia. It may involve the whole extent of both lids, or be confined to a few cilia of either lid. A large number of these cases seem to depend upon a scrofulous diathesis. The disease is one of considerable importance, for, although its progress is usually slow, even continuing for years without much change, it is very liable, if neglected, to result in serious injury of the lids.

The irritation produced by the presence of the dried secretions and by the inflammation of the follicles, is extended to the conjunctiva. The disease seems, sometimes, to include an eczematous condition of the edge of the lids. The constant inflammation of the sebaceous follicles, extending to the hair follicles, either tends to destroy the cilia, or to displace them, as in trichiasis. In other cases the inflammation produces great infiltration and hypertrophy of the lid, so that it presents a forbidding appearance, the edge being red and thickened, some of the cilia being totally destroyed, and others being displaced, as in trichiasis. The conjunctiva is also usually inflamed.

The treatment, to be most successful, should be commenced

in the early stage of the disease. As the patients often present symptoms of a scrofulous diathesis, particular attention should be paid to the general health. In such cases, pure air, nutritious diet, cod liver oil, iodide of potash, and sometimes, minute doses of bichloride of mercury, are especially indicated. Locally, the eyes should be kept clean during the day, by poultices of starch or slippery elm, applied for a few moments several times a day. During the intervals, the lids should be kept free from collections of secretion by rubbing the edges of the lids with any simple ointment.

Every night an ointment of red precipitate, gr. x—xx to the ounce, should be carefully applied to the edge of the lids. I have found in some obstinate cases that a strong solution of nitrate of silver, ʒj to the ounce, applied by means of a fine camel's hair pencil, to the base of the cilia, will prove beneficial. Tincture of iodine applied in the same way is often very effectual. Great care is required that these last mentioned remedies do not enter the eye.

Clay as an Application to Ulcers.—Dr. Schreber, Leipsic, recommends the use of clay as the most innocent, the most simple, and the most economical of palliative applications to surfaces yielding foul and moist discharges. He moreover considers that it has a specific action in accelerating the cure. Clay softened down in water, and freed from all gritty particles, is laid, layer by layer over the affected part to the thickness of about a line. If it becomes dry and falls off, fresh layers are applied to the cleansed surface. The irritating secretion is rapidly absorbed by the clay, and the contact of air prevented. The cure thus goes on rapidly. This clay ointment has a decisive action in cases of fœtid perspiration of the feet or armpits. A single layer applied in the morning will destroy all odor in the day. It remains a long time supple, and the pieces which fall off in fine powder produce no inconvenience.—*Dublin Medical Journal.*

SELECTED.

A NEW METHOD OF TREATING DISEASE BY CONTROLING THE CIRCULATION OF THE BLOOD IN DIFFERENT PARTS OF THE BODY.

By JOHN CHAPMAN, M. D., M. R. C. P.

It has long been known that the sympathetic nerve, called by Bichat, the nervous system of organic life, presides over those processes by which the body is developed and sustained. It stimulates and controls the action of the heart, alimentary canal, genito-urinary organs, and all those processes of growth, repair, and removal of *effete* materials on which the continuous vitality and health of the animal organism depend. During recent years, important additions to our knowledge of the functions of the sympathetic nerve have been made, chiefly by Prof. Claude Bernard and Dr. Brown-Séquard, especially with reference to its power of controlling the action of blood-vessels, or what have been termed its vaso-motor functions. But as the sympathetic and cerebro-spinal systems are intimately related, and, indeed, in some parts, inextricably and indistinguishably blended, both in structure and function, the nervous influence, whether healthy or not, which is exerted over the several organs of the body, is two-fold; hence, when that influence becomes abnormal, either in kind or degree, the most potent method of restoring it to its healthy condition, would be by a dual action at once on the sympathetic and cerebro-spinal nervous systems. The physician who acquires the power of directly controlling these great controllers of the organic functions would immediately obtain the mastery over a large number of diseases. I scarcely dare write the words, "I have done this"—so momentous are they if true; and yet I believe I have.

I have discovered that a controlling power over the circulation of blood in the brain, in the spinal cord, in the ganglia of the sympathetic nervous system, and, through the agency of these nervous centres, also in every other organ of the body, can be exercised by means of cold and heat applied to differ-

ent parts of the back. In this manner the reflex excitability, or excito-motor power of the spinal cord, and the contractile force of the arteries in all parts of the body can be immediately modified.

In order to lessen the excito-motor of the spinal cord only, I apply ice, in an India-rubber bag about two inches wide, along that part of the spinal column containing the part of the cord on which I wish to act. On the same principle, the vitality of the spinal cord may be increased by applying hot water and ice alternately, each in an India-rubber bag, if very energetic action be required; if less vigorous action be necessary, I apply ice, or iced water only, using it several times a day, for a short time on each occasion, with a long interval between each application.

If it be desirable to increase the circulation in any given part of the body, this I have found myself able to effect by exerting a soothing, sedative, depressing, or paralyzing influence (according to the amount of power required) over those ganglia of the sympathetic which send vaso-motor nerves to the part intended to be acted on. This influence may be exerted by applying ice to the central part of the back, over a width of from four to four and a half inches, and extending longitudinally over the particular segments of the sympathetic and of the spinal cord on which it is desired to act.

For example, intending to direct a fuller and more equable flow of blood to the brain, I apply ice to the back of the neck and between the scapulæ; increased circulation and warmth of the upper extremities are induced in the same way; the thoracic and abdominal viscera can be influenced in like manner by application to the dorsal and lumbar regions; while the legs and the coldest feet ever felt can have their circulation so increased that they become thoroughly warm, by an ice-bag applied to the lower part of the back.

The bags I use are of different lengths; of the width already named for adults, and of lesser widths, of course, for children. I have had them made both of India-rubber, and of linen with a surface of India-rubber upon it: the former are the best. The width of the bags is equal throughout, except at the opening, which is narrowed to facilitate tying, and elastic to admit easily the lumps of ice. When the bag is full, I divide it, if a long one, into three segments; this can be done by constricting it forcibly with a string; the ice of the upper part is thus prevented from descending, as the melting goes on, into the lower part of the bag. I am preparing a bag on

a new principle, which will be a great improvement on those I now use; but as it is not yet complete, I abstain from describing it here. I sustain the bag in the position intended by means of ribbon or tape passed through loops at the back of it, then over the shoulders, and round the body.

Theoretically, I feel assured that by the methods I have described physicians will be able to control the great majority of diseases; experimentally, I have received numerous and wonderful proofs that this assurance is well founded. By thus acting, by means of cold or heat, or both alternately or combined, on the spinal cord and ganglia of the sympathetic, I have succeeded in completely arresting the fits of many epileptics, and in curing the following maladies:—Paralysis, long continued and extreme headaches, prolonged giddiness, extreme somnolence, a feeling of want of firmness in standing and of security in walking, habitual hallucinations, loss of memory, weakness and dimness of sight, ocular spectra, inequality of the pupils, lateral anæsthesia, incontrollable spasmodic opening and shutting of the mouth, cramps of the limbs (in two cases of the hands, incapacitating the patients to continue their work), numbness of the fingers, incapacitating the patient to pick up small objects, or to use a needle, paralysis of the bladder, incapacity to retain the urine more than a few minutes (two cases recovered to a surprising extent), profuse and too frequent menstruation, scanty and irregular menstruation, extreme menstrual pains, profuse leucorrhœa, with long continued bearing down of the womb, and extreme pain of the back, habitual constipation, habitual diarrhœa, general coldness of the surface of the body which has continued for many years, habitually and hitherto irremedially cold feet.

For the sake of brevity I abstain from discussing here the applicability of the method above described to the several diseases which the physician is called upon to treat; but as many cases of paralysis and a very great majority of cases of epilepsy have hitherto proved incurable, I will in respect to these diseases, and especially in respect to epilepsy, make a few observations, and give the briefest outlines of a few cases, showing the results of my method of treating the last-named disease.

To cure paralysis primarily originating in a lesion, not of the brain but of the spinal cord, it is necessary to exert a curative influence, not only over the spinal cord, but also over the sympathetic nervous system, to the extent of its distribution of its vaso-motor nerves throughout the paralyzed limb;

to how slight an extent this has hitherto been possible, either by internal medicines or external applications, is too well known to need description here. Assuming the general truthfulness of the doctrines of Messrs. Kussmaul and Tenner, Schroeder van der Kolf, and of Dr. Brown-Sequard, respecting the essential nature of epilepsy, or the proximate cause of convulsive affections generally, we must become still more deeply impressed with the conviction of the necessity of influencing both the cerebro-spinal and the sympathetic nervous system, in order to exert any lasting curative power over that remarkable group of maladies. In Messrs. Kussmaul and Tenner's general summary of the results of their investigations concerning the nature and origin of epileptic convulsions, they say:—"It is probable that certain forms of epilepsy result from a spasm of the muscular coats of the cerebral arteries," and elsewhere they observed that if so, "the central point from which these (spasms) arise would consequently lie in the part from which the vaso-motory nerves take their origin, and therefore, if the result of Schiff's researches be correct, in the medulla oblongata. An excitement of this nervous centre would then be the first link in the chain of these processes, anæmia of the brain the second, and the epileptic attack the third." Dr. Brown-Sequard, in his "Researches on Epilepsy," after giving his reasons for thinking that "Epilepsy depends in a great measure on an increased reflex excitability of certain parts of the cerebro-spinal axis," proceeds to account for the successive phenomena of an epileptic attack, and, referring to one of the first of them—the paleness of the face—remarks, "We consider it a most interesting symptom, as it leads to a very probable explanation of the loss of consciousness in epilepsy. After Prof. Claude Bernard had discovered that the section of the cervical sympathetic nerve is followed by a dilatation of the blood-vessels of the face, I found that when this nerve is irritated by galvanism there is a contraction of these blood-vessels, and I explained the facts discovered by the eminent French physiologist and myself, by considering the sympathetic as the motor nerve of the blood-vessels of the face. I found, also, that the branches of the sympathetic nerve which animate the blood-vessels of the face, originate from the spinal cord with the branches of the same nerve going to the iris. When the excitation takes place in the spinal cord and the basis of the encephalon which gives rise to the fit, the nerve-fibres which go to the head are irritated, and produce a contraction of its blood-vessels. Of course this contrac-

tion expels the blood, and in consequence the face becomes pale. We think that at nearly the same time, when the origin of the branches of the sympathetic nerve going to the blood-vessels of the face receive an irritation in the beginning of a fit of epilepsy, the origin of the branches of the same and other nerves, going to the blood-vessels of the brain proper, also receive an irritation. A contraction then occurs in these blood-vessels, and particularly in the small arteries. This contraction expelling the blood, the brain loses at once its functions, just as it does in a complete syncope."

Though Prof. Schroeder van der Kolf differs somewhat from Messrs. Kussmaul and Tenner, and Dr. Brown-Sequard, in maintaining that the abnormal changes constituting the proximate cause of epilepsy, are more exclusively restricted to the medulla oblongata than is believed to be the case by those investigators, yet all these distinguished pathologists agree in recognizing the very important part performed by the vaso-motor nerves in producing an epileptic fit; and, though they differ as to the relative frequency of the cases in which the medulla oblongata is the primary seat of the attack, they also agree that it is very often the originating centre of the malady. It may, therefore, be stated that they all concur in the opinion that the proximate cause of epilepsy is two-fold, viz., an undue reflex excitability of the medulla oblongata, and an undue irritability of those branches of the sympathetic nerve which are distributed to the cerebral arteries, and which, in their abnormally excitable condition, induce spasmodic contractions of the cerebral blood-vessels, and the consequent loss of consciousness and fall, which usually usher in an epileptic fit. I agree with Dr. Brown-Sequard in believing that different segments of the spinal cord, as well as the medulla oblongata, are not infrequently the primary seat of epilepsy; indeed concerning the pathology of epilepsy, there is, so far as I know only one point in which I differ from that profound physiologist and skillful physician, under whose guidance, at the Hospital for Diseases of the Nervous System, it has been my good fortune to study. It is true that that "one point" is an important one, since, by diverging in the direction I have taken, I was led by a logical process to conceive of the method of curing epilepsy, which, when months afterwards, I was enabled to put it to the test of experiment, realized my sanguine expectations. For the sake of brevity, however, in this preliminary statement, I shall avoid discussing the point referred to. My immediate object in touching on the pathology of epilepsy

at all at present, is merely to show that while, as I have said, "to cure paralysis primarily originating in a lesion, not of the brain, but of the spinal cord, it is necessary to exert a curative influence, not only over the spinal cord, but also over the sympathetic nervous system, to the extent of the distribution of its vaso-motor nerves throughout the paralyzed limb," so, in a like manner, to cure epilepsy it is necessary to exert a curative influence not only over the spinal cord, including the medulla oblongata, but also over the sympathetic nervous system to the extent of the distribution of the vaso-motor nerves throughout the encephalon.

In treating paralysis according to the method above described, my first effort is directed to the spinal cord, which I endeavor to restore to a healthy condition by increasing or diminishing the circulation of blood in it. I effect either of these results by directly modifying its temperature. Moreover, as fibres from the ganglia of the sympathetic are distributed to the sheaths and blood-vessels of the spinal cord, it can be influenced by cold and heat, not only directly, but indirectly, by acting on those ganglia. The restorative power which I have been able to exert in this manner is truly surprising, and I believe quite unparalleled by any influence ever exerted by medicine.

If the paralyzed limb be cold, my next object is to increase the circulation in it; this I do, as already said, by lessening the vaso-motor power of those ganglia of the sympathetic which preside over the blood-vessels of the limb in question. In this manner I find that the circulation in it can be so increased as to make it even very unpleasantly hot.

The health of the spinal cord having been improved, and the circulation and consequent nourishment of the paralyzed limb having been adequately increased, I then, and not until then, apply galvanism to the paralyzed muscle, if this aid seems needful. When thus applied, after the cord and limb have been acted on as described, the affected muscles prove far more rapidly responsive to the galvanic stimulus than paralyzed muscles usually are, and recover their natural size and strength with proportionate rapidity. But in fact, such is the health-giving influence of the processes I have described, that the limb will generally recover its healthy condition without the use of galvanism at all.

The treatment thus described has reference to those forms of paralysis originating in a lesion of the spinal cord; but I have found myself able to exert a curative influence scarcely

less potent even when the paralyzing lesion is within the skull and certainly far more so than can be exerted by any internal remedy.

I could support these statements by several illustrative cases, but shall only venture to extend this paper by giving a few facts in evidence of the power over epilepsy, which my method of treatment places within the reach of the physician.

In order to cure epilepsy, care must of course be taken in the first place that all sources of eccentric irritation be removed, assured of this, as far as possible, I direct all my efforts to accomplish two objects—first, to lessen the excito-motor power of the spinal cord, by lessening the amount of blood circulating in it; and, second, to prevent those spasmodic contractions of the cerebral arteries which induce the sudden loss of consciousness constituting the first phase of an epileptic fit. To achieve these objects, I order—

First, and most important, ice to be applied to some one part or to the whole length of the back, and from two to eighteen hours a day, according to the special character of the case under treatment.

Secondly, if the extremities be cold, to aid them in recovering their wonted warmth during the first day or two of treatment—by frequently immersing them in hot water, and by friction, also in winter, by clothing the arms down to the wrists, and the legs down to the ankles, in flannel.

Thirdly, as auxiliaries, (1) to take abundant physical exercise, and to use dumb-bells when practicable, or other special means of increasing the respiratory activity and of expanding the energy of the spinal cord; (2) so to cut or dress the hair that it shall not cover or keep warm the upper part of the back of the neck; (3) to exercise the brain daily and systematically in some healthy study, or, if this be impracticable, to ensure regular mental activity by means of some interesting employment; and (4) to take care that the dress along the centre of the back be light and cool.

If ice be properly applied to the back, the extremities, however cold, may be made quickly warm, so that in many cases the use of hot water may be wholly dispensed with; but in severe cases, where immediate derivation of the blood to the extremities is urgently required, and more especially in winter, it is expedient to accelerate the influence of the ice applied to the sympathetic ganglia by the means just indicated.

The results of this method of treating epilepsy are exemplified in the following cases:—

Case 1.—A man, aged 42, began to have fits in 1854. During the twelve months previous to the beginning of my treatment (May 16) he had on an average, three fits of about twenty minutes' duration daily; since I began to treat him he has not had a single fit.

Case 2.—A girl, aged 17, began to have fits when between 13 and 14 years old. Has been accustomed since that time to have two little fits (*le petit mal*) daily. I began to treat her February 24, 1863. These little fits immediately became less pronounced, then having gradually lessened in number, ceased entirely at the end of the first week, and have never recurred.

Case 3.—A girl, aged 14, has had fits, chiefly little ones, for about six years. She becomes unconscious in each fit, but does not fall down. When I began to treat her, (April 23, 1863,) she was having fits at the rate of about four in each hour during the day, besides several each night. Each fit lasted from three to five minutes. The night fits ceased entirely in the middle of May, and the day fits, which now do not last above two or three seconds of time each fit, have declined at the following rates:

Total number of fits during the week ending			May 1,	50
"	"	"	" 8,	65
"	"	"	" 15,	47
"	"	"	" 22,	37
"	"	"	" 29,	26
"	"	"	June 5,	11
"	"	"	" 12,	10
"	"	"	" 19,	8
"	"	"	" 26,	5
"	"	"	July 3,	6
"	"	"	" 10,	2

Note.—During the week ending May 8, the patient suffered much from toothache, and at length had two teeth drawn. Hence, I believe, the fact that she had more fits that week than the previous one.

Case 4.—A girl, aged 20, suffers from falling fits of the ordinary kind, lasting about three minutes each, from little fits, which she calls her "jerks," and in which she becomes unconscious, but does not fall down, and from a frequent quivering of the lips, which is a serious impediment to speech. Of the falling fits she usually has a large but uncounted number each month. In April last she had them continuously one after another throughout each day during a week. Of her little fits or "jerks," she usually had ten in each of the six days of her catamenial period, and one during each day of the inter-

val. The quivering of the lips is a constant trouble. I began to treat her May 27; since that time she has had one falling fit, lasting about three minutes, and two lasting but an instant each; and since June 15, excepting one little "jerk," without losing consciousness, she has had no jerking fit, no quivering of the lips, and no abnormal symptom whatever.

Case 5.—A boy, aged 13, during the last twenty months has suffered from falling fits, and what his mother calls "stagnation fits," in which he becomes unconscious, but does not fall. On an average he had, until I began to treat him, about fifty of each kind of fit during each month. He came under my care June 4. Since that date he has had only one falling fit, which was induced by his brother, who made him angry, and has had no little fit whatever.

Case 6.—A boy, aged 14, in the habit of having an average of twelve fits daily, each preluded by a shriek. I began to treat him June 11. On that day he had four fits, but each of them without a shriek. Since that day he has not had a single fit.—*Medical Times and Gazette.*

DISLOCATION OF THE HIP JOINT

SUCCESSFULLY REDUCED BY MANIPULATION FIVE MONTHS AND A HALF AFTER THE ACCIDENT.

By J. NEWTON BROWN, M.D., San Jose.

The subject of this paper was suggested by a case which came under my care while acting as one of the attendant physicians to the Infirmary of Santa Clara County, and on account of the success which attended an operation usually considered impracticable in such cases, I have thought it worthy of being reported.

Horatio N. Grant, aged 56, sanguino-nervous temperament, vigorous constitution, and in good health, was admitted to the Infirmary for an injury of the hip, which he had received five months and fifteen days previously, by being knocked down and run over by a horse. Upon examination it was found that the right femur was dislocated into the thyroid foramen, the hip was flattened, trochanter major depressed, the limb everted, abducted, and one and a half inches longer than that of the sound side. He walked with a cane, but was unable

to use the limb in any manner which would necessitate motion of the thigh, except in a lateral and semicircular direction. He had been examined shortly after receiving the injury, by a physician, who he said "pulled at the limb and gave him some liniment." He had afterwards remained in bed about three weeks, receiving no further attention, and finally, after much suffering in traveling from place to place on foot, came to the Infirmary in the condition above described. A careful examination proved that the bone was exceedingly immovable except in one direction—viz: slight abduction, with very limited rotation, and that not without giving great pain. Taking into account the excellent physical condition of the patient, I determined to attempt reduction by manipulation, believing that if I failed in this, I could at least increase the mobility of the limb.

The patient was placed under the influence of chloroform, and when fully anæsthetized it was found that although the bone admitted of slight motion, it seemed to resist any efforts at flexion or adduction; and fearing, from the extent and firmness of the adhesions, that any attempt at reduction might result in serious laceration, I had almost determined to desist from further interference, but having been so earnestly solicited by the patient to undertake any thing, however hazardous, which might afford any chance of relieving him, I determined if possible to break up the adhesions, hoping that at least greater usefulness of the limb would be acquired. Flexing the leg upon the thigh, and placing my breast against the knee, I gradually threw my weight upon the knee joint, using the femur as a lever, and had the satisfaction of feeling the limb gradually move towards the patient's body, the adhesions giving way with quite an audible snapping and tearing sound. The manipulations were continued about ten minutes, and the mobility of the thigh greatly increased, but as there were still powerful muscular contractions, which seemed to increase with every movement of the femur, I placed the limb again in a horizontal position, and discontinued the manipulations. When the patient came from under the influence of chloroform, morphiæ acetas, and antim. et potass. tart. were administered, and cold lotions constantly applied to the hip. I was surprised the next morning to find that little, if any, constitutional disturbance had been produced, and the patient expressed himself as feeling quite comfortable. I now felt sanguine of being able to reduce the dislocation, and only feared adventitious deposit in the acetab-

ulum. On the day following, chloroform was again administered, and the manipulations commenced as before. The adhesions continued to give way, and in twenty minutes the mobility of the limb was as great as could be attained from the unnatural position of the head of the bone. I now flexed the leg upon the thigh, and the thigh upon the pelvis, very slowly and cautionsly carrying the knee over to the sound side and then across the abdomen, at the same time using considerable force in order to keep it as near the body as possible, and at this stage of the process the luxation was converted to the dorsum of the ilium; the limb was shortened, the toes inverted and resting upon the instep of the other foot. On making a second attempt, when I had arrived at this stage of the process when the knee was nearly on a line with the injured side, I abducted it gently, turned the toes outwards and the heel inwards, carrying the *foot* across the sound limb, making at the same time gentle oscillations of the thigh when the head of the bone slipped into the acetabulum, the foot came down and the deformity was removed. The feet were confined together, the limb bandaged, a full anodyne given, and with subsequent treatment in the way of light diet, evaporating lotions, &c., in three weeks the patient walked out into the yard with a cane, and in nine weeks from his admission to the Infirmary he was discharged cured. I have seen him since, nearly a year subsequent to the operation, and he walks as well apparently as any one: in short, is perfectly well. This case is interesting on account of the time which had elapsed previous to the operation, and as showing the practicability and superiority of "Reid's Method," as compared with the pulleys.

Dr. Reid's directions are as follows:

"Let the operator stand or kneel on the injured side, seize the ankle with one hand, the knee with the other, then flex the leg on the thigh, next strongly adduct it, carrying it over the sound one, and at the same time upward over the pelvis, by a kind of semicircular sweep, as high as the umbilicus; *then abduct the knee gently*, turn the toes outwards, the heel inwards, *and carrying the foot across the opposite and sound limb making gentle oscillations of the thigh*, when the head of the bone will slip into its socket."

Reid's method, in common with all improvements in surgery, has had its opponents, yet among those who have really investigated it, there are few who condemn, and many who award the praise which its merits deserve. Hamilton collect-

ed sixty-four cases in which it had been successful, and in sixteen of these cases manipulation succeeded after extension had failed. I have seen it resorted to in seven cases, varying in duration of time after the injury—from a few hours to 5½ months—and in every instance with favorable results. Three of these cases were on the dorsum of the ilium, two on the pubes, one in the ischiatic notch and one in the obturator foramen. One of these patients was 63 years old, the youngest about 36.

We do not wish to be understood as claiming infallibility for this method of reduction, for we will sometimes fail in reducing a dislocation of the hip, in spite of all our endeavors, either by traction or manipulation; but we do claim that all reducible cases can be successfully treated by Reid's method. The question comes in here—as to when, and under what circumstances, we should attempt reduction at all—this is a matter for the surgeon to decide.—*Pacific Medical and Surgical Journal.*

CLINICAL LECTURE ON DIPHTHERIA.

By JOHN T. METCALFE, M. D.,
Professor Practice of Medicine, University Medical College

LECTURE II.

I have said* that, as a rule, the paralysis following diphtheria is prone, by its natural history, to terminate in cure. This we may confirm and expedite by the use of digestible, nutritious food, by the administration of tonics, by friction and kneading of the paralysed parts when practicable, and, occasionally, by the aid of the galvano-electric current It is well understood that pure air and proper exposure to sunlight are not to be omitted.

I think highly, among the tonic remedies, of the syrup of the phosphates, or what it has been fashionable with some to call chemical food. It is readily taken, agrees well with the stomach, and gives us all the results we should, *à priori*, expect from its composition.

* June number, page 272.

Among tonics of the vegetable class, I prefer strychnia to any other. I do not know that it is better than nux vomica in itself; but the invariable composition of the pure alkaloid or its salts enables us to regulate the dose with perfect accuracy.

I usually write for—Strychniæ, gr. j. Acid. Nitric. Dilut. f. 3j. Aquæ f. 3 vij. M.

Each minim of this solution contains the one-four-hundred-and-eightieth part of a grain of the salt. To a child of three years I would give from three to five drops in a desertspoonful of water, three times a day.

The beneficial effects from change of air and sea-baths are not less strongly marked in convalescence from diphtherial paralysis than from other adynamic conditions.

The treatment I have thus indicated, gentlemen, is not complicated. It is easy to remember, and I believe embraces nearly everything that is essentially necessary.

As this lecture is intended to anticipate certain questions from you, after graduating, concerning diphtheria, which I would otherwise have put to me by letter, it may not be amiss to say what should be done with regard to your conduct at the breaking out of an epidemic.

You will at once be asked as to *the cause* of the visitation. There is scarcely anything on which the non-professional public insist more strongly, than that a doctor should be able to explain *the reason why* such epidemics prevail. Honesty is the best policy in such cases. Say what is true, "I don't know." Avoid the unwholesome practice of telling people that it is owing to an animal having been drowned in some neighboring pond, from which water is supplied; that it is because the flour or other bread-making material was bad; that the wind blew from some particular quarter; that foolish virgins had put bad oil in their lamps by which the patients read or worked, or the like. We are in ignorance, thus far, of the cause which calls into existence most epidemic diseases. Let us, whilst confessing our darkness, strive and hope for light. As yet it has not been willing to shine on us in such a way as to let us see the reason of diphtherial visitations.

Every one who has had much dealing with diphtheria will recognise the practical wisdom of Dr. William Jenner's division of the disease. It is as follows:

1st. The mild form, in which there is little or no constitutional disturbance, with little or no trouble or pain in swallowing. Albumen is not found in the urine of these cases,

which are recognised as diphtherial, by the epidemic prevalence of the disease, and by the patches of exudation revealed by inspection of the fauces or other parts affected.

2d. The inflammatory form. In this, symptoms and signs of more or less severe facial inflammation precede the membranous development; intense injection of the submucous cellular tissue, producing, at times, marked œdema. Febrile action, with great quickness of pulse, is a constant accompaniment of this form.

Doctor Jenner also speaks of the nasal, the laryngeal, the asthenic, and the insidious varieties. They are due simply to certain peculiarities, explicable by their names, and need not detain us longer in their consideration. They will be mentioned again when we come to speak of prognosis. A question which you must be prepared to answer from your patients is, "Doctor, shall I separate the sick child" (for it occurs so much more commonly in children) "from those who are well? Is the disease contagious?"

The usual dissidence among authors as to its contagious nature exists. I advise you very strongly, where it is practicable, to isolate the sick member of the family, and to encourage the removal of the others to some place where the disease does not prevail. If we could be sure that the individual instance was entirely sporadic, it might be proper to give other advice; but, unfortunately, we have too much evidence of its tendency to desolate certain localities, to be able to regard it as otherwise than of epidemic type. You would not hesitate to advise the removal of well people from New Orleans during a visitation of yellow fever, nor from New York whilst cholera prevailed. No more should you hesitate to advise your patients to take their healthy children away from a neighborhood scourged by diphtheria. Setting aside the question of contagion, you are still bound to give the advice indicated. Nor must you forget how the famous French physician Valleix, and our own talented and lamented Dr. Frick, of Baltimore, contracted fatal diphtheria by applying their mouths to the wounds made in tracheotomizing patients threatened with death from suffocation from the laryngeal variety.

The letters I receive from my old friends of former graduating classes almost always indicate anxiety on two points: firstly, what to say in a prognostic way; and, secondly, what it is best to do therapeutically.

Some of those now listening to me have seen with their

preceptors many cases of the disease which now occupies us. They have had varied experience. With some the mortality has been very great; with others scarcely any cases have been lost. With nearly all, the greatest number of deaths have occurred at the commencement of the epidemic. This, you know, is observed as a law of these visitations, whether they be of cholera, yellow fever, typhus, dysentery, or what not. Nor is it difficult of explanation. In the earlier days of its prevalence, those most predisposed are those least able to resist the morbific influence. Moreover, this latter seems to grow weaker, to exhaust itself, with time.

As to the other point, why some should be led to think it a disease of little gravity, and others of the most dangerous nature, that is simply owing to the *type of disease* they have encountered. Don't be misled by believing it due to the peculiar excellence of the treatment pursued. I know no better exemplification of what I mean than by referring you to the statistics of enteric fever, as seen in the Massachusetts General Hospital. H re there was the same disease, nosologically speaking; the same treatment prevailed; the hygienic conditions were of the best; the same able men, and of their great ability we can all come up as cheerful witnesses; and yet the mortality indicated was as follows: "In the year 1830, the deaths were one in three and a half; in 1831, they were one in fourteen and a half; and in 1829, one in twenty-five. From 1832 to 1835, inclusive, the mortality was a little less than one in six. From November, 1836, to November, 1838, there were fifty-five successive cases without a single death." Of the prognosis in this, as in other epidemic diseases, speak guardedly in the commencement. No man can know what type the visitation may assume. So also in individual cases, be careful as to what you prognosticate. Some of the most promising cases, in appearance, that I have ever seen, have belonged to the class of insidious diphtheria. There has been little exudation, scarcely any fever, or interference, worth mentioning, with voice or breathing, when suddenly the larynx is invaded and the danger of death is imminent. In general, diphtheria is not fatal provided this last-mentioned complication does not occur. It is possible that asthenia or cardiac paralysis may kill, but in point of fact they very seldom do so. What gives us greatest anxiety is the *uncertainty as to the course* the exudation will take. Should we find it commencing in the posterior and inferior pharyngeal region, extending forwards and upwards, and leaving a healthy mucous membrane behind it,

as the exudation is liquefied, we may hope for a happy termination in so far as the most imminent danger is concerned; but, I repeat, until all exudative action has ceased, just anxiety must continue to be felt.

What shall we do in the treatment of a case?

In the first place, attend to the hygienic condition of your patient; see that a comfortable bed be provided; that it be properly placed, with reference to air, light, and noise; and that no more persons be allowed about the sick person than may be necessary to attend to the duties of nursing. Unfortunately, there is a tendency for the female relatives and friends to hold a protracted meeting over children who are ill of diphtheria. I need not tell you how much of the air they breathe and contaminate; how much they talk to and worry the patient; how much they benevolently suggest, each one, her specific remedy, and how much miscellaneous trouble they give. Usually, one person at a time, who has read Miss Nightingale, is all that should be allowed in the sick room.

Having secured this, a cardinal and too much neglected matter, what shall you do in the way of medication?

That will depend on the case you may be called upon to treat. Should it be one of the mild variety, I should advise you to do nothing beyond nursing and giving appropriate nourishment. By this, I mean such nutritious, easily digested food, as we can meet with in the animal broths, milk, and the farinacea. Do not overload the stomach, with the absurd hope that in its somewhat enfeebled state it will be able to go into the digestive business with so much energy as to counteract the natural tendency to debility. Unless for some special reason, the patient should not be made to eat oftener than once in three or four hours, and then the quantity should be carefully observed. I think something might be profitably written on this habit of stuffing sick people, that prevails with some practitioners. I know of no disease in which it is so much the rule as in typhus fever. In this, beef tea and brandy are, by some, systematically given, in the belief that the more the patient can be induced to swallow, the better will be his chance for recovery. Now there is nothing that so certainly tends to provoke restlessness, "nervous irritability," and insomnia, as the presence of material in the stomach which is beyond the digestive power of the patient.

We have a forcible illustration of this in the malaise that occurs from an over distended bladder. I can now recall cases in my experience, where opiates, by the mouth and by injec-

tion, valerian, musk, camphor, lavender, and many other antispasmodics, too tedious and useless to mention, had been prescribed by the doctor, without any relief, in which the evacuation of the bladder by catheter, or of the stomach by vomiting, have at once produced the quiet and sleep that know no succedanea as remedial agents.

It is very rarely that a sick person requires so much food as one in health would consume. It may be requisite to give it oftener, but even then we must be careful as to quantity and quality.

When the stomach is rebellious to the point of rejecting whatever is swallowed, I think it safer to resort to external applications in the way of irritants to the epigastrium, and to waiting for tolerance to be established, than to go beyond the simpler means resorted to, such as prussic, carbonic, or the mineral acids, creosote, or a few drops of chloroform. In diphtheria, be very careful of the stomach. Not long ago, I met with a case in which a delicate little girl, suffering from gastric irritability, was made to take a nauseous dose of cinchona infusion every four hours. This was done with a view "to strengthen the child, and to bring about an appetite," notwithstanding that the dose was offensive, and only swallowed after a hard fight, each time.

For some days, strength can be very well supported by the use of nutritious enemata. To these it is wise to resort where sustenance is imperatively called for, and the stomach will not perform its duty. For such enemata, the strong animal broths are preferable. *Let the stomach rest.* In view of the obvious tendency to diminution of the red globules of the blood, as a part of diphtheria, the use of iron would naturally suggest itself. I have, almost always, prescribed small doses of the sesquichloride tincture, administered in cold sweetened water. This is readily taken by children, and is worth much more, in my opinion, than any or than all other so-called constitutional remedies put together. A child three years old will readily take from five to ten drops of the tincture, every two or three hours.

With many practitioners, the chlorate of potash is considered as the chief remedial agent on which dependence should be placed. I have prescribed it largely, but with less satifactory results than seem to have rewarded the experience of some others. Should you employ it, I would recommend you to be careful to avoid the large doses sometimes advised. I have known instances in which severe gastro-intestinal irritation has followed its use.

Where stimulants are indicated, wine-whey, milk-punch, whiskey, or good brandy will be found beneficial. In cases of great thirst, nothing is more grateful nor more easily retained by the patient than mint-julep. Under similar circumstances, you must not forget how useful the carbonic acid water proves; especially where there is irritability of the stomach. Cracked ice is also an excellent remedy.

Our anxious attention, as I have already told you, in this disease, is directed towards the air-passages. Is there any means in our possession by which we can prevent the exudation from reaching them, in the way of topical medication? I am sorry to say that I do not believe there is. In different published articles on the subject, there are many means advised, such as swabbing the throat with the muriatic tincture of iron, with muriatic acid, with bromine, nitrate of silver, etc.; but I think it safe to advise you not to employ these with the hope indicated. Punching and poking about the tender parts with hard instruments, in my opinion, is much more apt to result in harm than in good.

Some years ago, I thought I had seen benefit from applying the iodide of bromine (four to eight drops to an ounce of gum syrup), by means of a large, soft camel's hair brush. I then believed that it prevented the membrane from extending. In this, I was probably mistaken. The application has one certain good result, whenever there is a sanious discharge from the nose or fœtor of the breath. It acts as an antiseptic. So, no doubt, would creosote or carbonic acid, properly diluted. Nasal injections of liquor of persulphate of iron and glycerine (℥j to ℥j) are also very serviceable.

In the terrible dyspnœa which accompanies the laryngeal form, the inhalation of steam is more efficacious than any other remedy. The apparatus recommended in Dr. Watson's Practice of Medicine may be resorted to; or the patient may be kept in a room so arranged as to be constantly filled with vapor, at a proper temperature, not less than 98° or 100° F.

In these always bad cases of laryngeal diphtheria, we must try to sustain life until the membrane shall have undergone the liquefactive change to which it has a natural tendency. It will then be expectorated, and we may hope for a cure, provided the exudation has not extended too far down the air-passages.

In conclusion, never fail to keep your patient in bed whilst there is fever or debility. Be careful of premature exposure on account of the impressible state of the general nervous system during convalescence.—*Am. Med. Times.*

THE CASE OF SURGEON-GENERAL HAMMOND.

Brig.-Gen. William A. Hammond, Surgeon-General of the United States, was tried by a court martial convened by order of the President at Washington on the 15th of January, 1864, consisting of Major-General R. J. Oglesby, United States Volunteers, President; Brig. Gen. W. S. Harney, U. S. A.; Brig.-Gen. W. S. Ketchum, Brig.-Gen. G. S. Greene, Brig.-Gen. W. W. Morris, Col. United States Artillery, Brig.-Gen. A. P. Howe, Brig.-Gen J. P. Slough, Brig.-Gen. H. E. Paine, Brig.-Gen. J. C. Starkweather, with Major John M. Bingham as Judge-Advocate.

The charges are in substance as follows:

First—That Surgeon-General Hammond wrongfully and unlawfully, and with an intent to favor private persons in Philadelphia, prohibited Medical Purveyor Cox from purchasing drugs for the army in the city of Baltimore.

Second—That he unlawfully, and with intent to aid one Wm. A. Stevens, to defraud the Government of the United States, instructed George E. Cooper, Medical Purveyor in Philadelphia, to buy from Stevens, for the use of the Government, 8,000 blankets of inferior quality which were unfit for hospital use, he, the Surgeon-General, well knowing the blankets were of inferior quality, and that the Medical Purveyor had refused to purchase them.

Third—That he corruptly, and with intent to aid Stevens to defraud the Government, gave an order to Stevens to turn over to Medical Purveyor Cooper, at Philadelphia, 800,000 pairs of blankets; whereby he induced the Purveyor to buy on Government account, and at an exorbitant price, 7,677 pairs of blankets, which he had before refused to buy, and for which Mr. Stevens received $3,531,400.*

Fourth—That the Surgeon-General, well knowing that Wyeth & Brothers, of Philadelphia, had furnished medical supplies to the Medical Purveyor at Philadelphia, that were inferior in quality, and did corruptly, unlawfully, and with intent to aid Wyeth & Brothers to furnish additional large supplies to the Government, and thereby fraudulently realize large gains, gave the Medical Purveyor an order to have con-

* This is evidently an error. The 800,000 pairs of blankets should be 8000, and the sum paid should be 100 times less than the amount in the text.

stantly on hand hospital supplies of all kinds, for 200,000 men for six months, and directed the Medical Purveyor to purchase a large amount thereof, including $273,000 worth from Wyeth & Brothers.

Fifth—That he unlawfully directed Wyeth & Brothers to send 40,000 cans of the extract of beef to various places, and to send the account to the "Surgeon General's office" for payment.

Sixth—Conduct unbecoming an officer and a gentleman, in falsely representing that Medical Purveyor Cooper had been relieved from duty at the request of Gen. Halleck.

Seventh—That Surgeon General Hammond unlawfully ordered the Medical Storekeeper and Acting Purveyor at Washington to purchase 3,000 pairs of blankets from J. P. Fisher at Washington.

A plea of "not guilty" was entered upon each of the charges and the specifications, and after a full hearing of the testimony for the Government and the defence, and an examination of a large amount of documentary evidence, together with the consideration of the elaborate arguments of both sides, the court rendered a finding of guilty on all the charges, and sentenced the accused to be dismissed the service and to be for ever disqualified from holding any office of honor, profit or trust under the Government of the United States.

Pursuant to the Act of Congress, the record and proceedings were reviewed by Brig. Gen. Holt, Judge-Advocate-General, who delivered an elaborate opinion, concluding as follows:

"That the natural and necessary results of the acts of the accused, as established by the record, involved a criminal spoliation of the Government treasury, which alone would have called for his dismissal from the service, cannot be denied; but when it is remembered, as shown by the proof, that this spoliation was in part accomplished by the purchase of inferior medical supplies and stores, thus compromising the health and comfort and jeopardizing the lives of the sick and wounded soldiers suffering in the hospitals and on the battle-fields of the country—soldiers solemnly committed to the shelter and sympathies of the office held by the accused, by the very law and purpose of its creation, it must be admitted that this fearfully augments the measure of his criminality."

The trial, which lasted nearly four months, was one of the most patient and thorough that has ever occurred in our military history, and the accused had throughout the assistance of eminent and able counsel in conducting his defence.

The court, which was composed of nine General Officers, at the close of this prolonged investigation, declared him guilty of the charges preferred, and awarded the punishment which, in their judgment, was in accordance with the nature of the offences committed, and a careful examination of the record leaves no room for doubt as to the validity of the proceedings, or the justness of the findings and sentence in this case.

The record, proceedings, and sentence of the court in the foregoing case are approved, and it is ordered that Brig. Gen. William A. Hammond, Surgeon-General of the United States Army, be dismissed the service, and be for ever disqualified from holding any office of profit or trust under the Government of the United States. A. LINCOLN.

Dr. Hammond has added as a sequel to the finding of the Court, the following card:

The undersigned has read in *The Sunday Morning Chronicle* of this city, the remarks of Judge-Advocate-General Holt in the proceedings of the court martial in his case. He learns from this review, and from the order of the President appended, that he has been dismissed the army and prohibited from ever holding office under the United States. The undersigned has no idea that he will lose one friend by this action of the Administration; but his good name is valuable to him, not only as regards those who know him, but those who do not. So soon, therefore, as he is furnished with a copy of the findings and sentence of the court, he will present to the public a brief history of the facts leading to his arrest and trial, a review of the record in his case, and some commentaries on the Report of the Judge-Advocate-General. With these he will be content to submit to the judgment of the world as to how far he has been guilty of the offences charged, and how far he has been the victim of conspiracy, false swearing, and a malignant abuse of official power.

(Signed) WILLIAM A. HAMMOND.

Washington, August 22, 1864.

THE SANITARY COMMISSION.

The present war, terrible in its magnitude and duration, has had benevolent accompaniments never before known in the history of the world. The various organizations for the

relief of soldiers, sick and wounded, in the camp, the field and the hospital, which are planted squarely on the generosity and patriotism of the people, brighten the gloom which our three years of conflict has hung around our country. Foremost among these is the Sanitary Commission, which has become a gigantic humanitarian organization, for the relief of the sick and wounded of our army. Only those intimate with its immense operations can utter its eulogy, or realize one-half its beneficient work.

The chief object contemplated by the Sanitary Commission, when it was created by the Government, was the prevention of disease. Modern sanitary science was hardly recognized in the ancient regulations of the medical bureau, and consequently, during the summer of 1861 our armies were in serious danger of destruction from epidemic disease. The first business of the Commission, therefore, was to awaken general attention to the sanitary interests of the army, and to do what it could to improve the sanitary condition of camps, hospitals, and men. It brought to bear upon Government the influence of the medical profession throughout the country, effected the extension and invigoration of the medical bureau, and secured the express recognition of the prevention of disease, no less than its cure, as among the functions of the medical staff. Government now employs its own sanitary inspectors, and does a certain portion of the preventive work which the Commission performed during the first year of its existence. But the Commission find it necessary to keep up an inspectorial corps likewise.

The visits of the inspector usually disclose something that can be done to improve or promote the health of the command. He finds that quinine is necessary to prevent malarious disease, or vegetables to prevent scurvy, or that stimulants, bedding, disinfecting agents, or hospital diet, are wanted. In consequence of his reports, the Commission have dug wells, to improve the water-supply of camps, improved the ventilation of hospitals, built temporary hospitals and quarters to replace unwholesome and dangerous buildings, furnished and fitted up hospital transports, and converted ordinary railroad cars into railroad ambulances, with cooking apparatus and store-rooms, and litters hung on springs, in which thousands of men with fractured limbs have traveled thousands of miles without injury.

It has furnished material for the vaccination of thousands of men at a time, when the medical bureau was not able to

supply immediately what was needed. It has circulated throughout the army, and especially among the medical staff, many hundred thousand of its medical documents. These have been prepared by some of the most eminent surgeons and physicians of the country, and embody, in a condensed form, the latest results of science. They have been of great use to our army surgeons, who often encounter cases for which their previous practice has not prepared them, and who have neither medical libraries nor opportunities for consultation.

It is, however, through the Relief Department of the Sanitary Commission that it is best known to the people. In this work it aims, not to supplant, but to supplement the Medical Department of the Government, to meet exigencies for which the Government has not provided, and to furnish such supplies as the Government does not and can not. When the Medical Purveyor has the articles needed in the hospital and camp, the army draws them from him; when he is out, or when from some emergency a larger supply is needed than is provided by Government, or when because of some technical informalities in the manner of making out requisitions the Purveyor is obliged to refuse them, and thus endanger life by the delay, the army calls upon the Commission, which never fails to respond to the call.

The relief agents of the Commission keep up with the army as it moves forward. Where the army encamps in the morning, the Commission has pitched its tents long before night. It reaches a new base as soon as there are soldiers to protect it, and is at work establishing hospitals and providing necessary stores before the ponderous machinery of the Government has moved; its red flags are seen everywhere at the front, blending with the stars and stripes, where it is establishing its feeding stations and depots of supplies. Prominent and experienced agents accompany each division of the army, with organized corps of assistants, wagons and supplies.

It is at great battles that the agents of the Commission are eminently useful. The battle-service of the Commission requires large funds and supplies. At Murfreesboro, Antietam, Gettysburg, Chattanooga, Vicksburg, and Port Hudson, sudden and vast demands were made. Fifty thousand dollars would not cover the outlay of the Commission the first two weeks after one of our great battles. At Gettysburg it was $75,000. The average cost is $3.20 to a man; at Gettysburg it wa $10 per man. The outlay of the Sanitary Commission during the months of May and June, for the battle necessities of the

present campaign, was over $500,000, exclusive of the supplies directed to it, and which it distributed.

This service requires comprehensive forethought, prompt and energetic action, and unwearied labor in infinite detail. Of some articles the requirements are enormous. Condensed milk, and extract of beef by the ton; wines and spirits by the barrel; crackers and farinaceous food by the ton; tea, coffee and sugar by the chest and hogshead; cargoes of ice; potatoes, onions, pickled cabbage, sourkrout, lemons and oranges, by car loads; shirts, drawers, sheets, crutches, bed-rests and mattresses, by tens of thousands! And this material has to be transported by wagon trains from one base to another; forage for horses has to be provided; drivers have to be paid, steamers chartered, and coal consumed; and yet so economically is the whole work of distribution managed that its cost is less than three per cent.

In addition to this, the Commission supports twenty-five Soldiers' Homes or Lodges, scattered over the whole field of war from New Orleans to Washington; and twenty-three hundred soldiers a-day are taken care of in these homes. Multiply 2,300 by 365, and you have over 800,000 men thus relieved annually. Three other agencies to secure the soldiers' rights are maintained by the Commission: 1. Claim agency to secure his bounty; 2. A pension agency; 3. A back-pay agency—all of them giving their services to the soldier free of charge. Often $20,000 back pay is secured in one day. A Hospital Directory is also sustained, by which the whereabouts of the sick men is determined, when they are lost to their friends. It costs $20,000 a-year to maintain it, but is worth a million, if the relief afforded to human anxiety can be estimated in money.

To carry on this vast human machinery, the Commission employs 200 agents at an average of about $2 per day—less than an ordinary mechanic's wages—or a total of $12,000 per month, who operating from Texas to the Potomac, or from Charleston to Kansas, and the results are such as to justify the nation's pride in this grand and beneficent, yet truly American institution.—*People's Journal of Health.*

THE ORIGIN OF
COW-POX AND THE NATURE OF VACCINE VIRUS.

Investigation on this subject in the Paris Academy of Medicine, has led to the following conclusions:—

1st. That vaccine virus (as a thing separate and apart) has no existence.

2d. That the pretended vaccine virus, which we consider antagonistic to, and neutralizing the variolus virus, is the variolus virus itself.

3d. That the equine and bovine species are subject to an eruptive malady which is identical, as regards its nature, with variola of the human species.

4th. It is demonstrated that the same is the fact as regards several other species of animals, pigs, sheep, dogs, goats, etc.

5th. The local and general phenomena with animals are the same as those observed in man. The only difference as regards the pustules are those which depend on the structure of the skin and the number of the hairs.

6th. As in the human species, so in the equine and bovine, variola may appear sporadically.

7th. From the horse we may inoculate the cow, and reciprocally.

8th. From the cow we may inoculate, without difficulty, individuals of the human species, provided they have not had spontaneous or inoculated variola.

9th. The cow, the horse, and several other species may be inoculated with variolous matter from the human species.

10th. When a variolous epidemic occurs among men, it often extends itself, by contagion, to other animals.

11th. An epidemic of variola may commence among animals, and extend to man.

12th. Inoculated variola produces a much less degree of general reaction than does variola developed by contagion. This is true in both man and lower animals.

13th. The pustules which result from inoculated variola, are often limited to the points inoculated.

14th. When a secondary eruption is produced, it is almost always insignificant, and composed of a small number of pustules.

15th. In a general manner we may say that the variola of animals is more discrete, and less severe, than that of the human species.

16th. That the dangers of inoculation of variola in man have been much exaggerated. The unprejudiced study of what has been written on this subject will convince of this.

17th. It is probable that animals, as man, are subject to aphthous eruptions.

18th. But the *maladie aphtheuse*, as it is described by writers on veterinary medicine, is nothing less than variola.—*Medico-Chirurgical Review.*

Dissolving Power of the Pancreatic Juice.—M. Corvisart has shown that in animals the pancreatic juice has the power of dissolving albuminous foods without the assistance of the gastric juice or the bile; and now he has demonstrated the same thing in man. A hospital patient, in perfect health, having suddenly died from chloroform administered for the reduction of the femur, M. Corvisart removed the pancreas; and with the prepared juice and ferment of it, operated on albuminous matters. He found that a large quantity of albumen and fibrin was rapidly digested with its assistance.—*Brit. Med. Jour.*, May 28, 1864.

Aggregate Labor of Mankind.—Along with the compassion that is excited by listening to a tale of want, there is apt to arise, at the same time, a feeling of astonishment that such a thing should *be* in a land like this. Perhaps, however, the true wonder is that want is not universal. One-half of the race die before they have contributed an iota to the world's sustenance or their own. One-half of those who survive the period of childhood are women, who do not, as a general thing, contribute directly to the production of wealth. Of the men, many are sick, many are old, many are idle, many are wasteful, many are parasites. Those who do work and live to the age of three score years and ten, spend one-third of their lives in bed, one-twentieth at the table, one-sixth in recreation. Much of their time is wasted in mistakes; much of what they succeed in producing is swept away by fire and flood. During half of the year Nature sleeps. One harvest in five proves a

failure. Only a fraction of the earth's surface is capable of cultivation. A large part of the general labor is absorbed in the production of luxuries, in repairing the damages of war, in preparing for future conflicts, in the transportation of produce, and in journeys. Probably not more than *one-tenth* of the whole amount of human force is expended in earning the world's daily bread. The standing marvel, therefore, of society is, not that any should suffer want, but that there should be any who do not.—*Home Journal.*

Atropia : Its Action and Uses.—Atropia, when applied locally in solution (without spirit), is not a local paralyzer, as commonly supposed, but it appears rather to quicken the contraction of the parts to which it is applied. Applied directly to the smaller arteries, atropia constricts them (Jones), and this effect may continue for many hours. It hence, probably, causes relaxation of the tissue of the iris, by causing constriction of the arteries entering it. In an atropised eye, the vision is clearer with distant than with near objects; this shows that the lens has receded and approached the retina, and is caused by a relaxation of the erectile structure of the ciliary processes from the constricting action of the atropia. This theory of the turgescence or emptiness of the vessels of the iris, causing, respectively, the contraction or dilatation of the pupil, explains why we have wide pupil so frequently in atonic and exhausting diseases, in aneurism of the chest and neck, impeding the passage of blood into and through the carotid. Worms and diseases of the belly in children dilate the pupil and impair the sight, probably by reflex action through the sympathetic nerve, exciting the radial fibres of the iris, and contracting the cerebral arteries.—*Dr. A. Fleming.*

Grafting Animals.—Dr. Paul Bert has published a work on the curious subjects of animal grafts. He succeeded in making Siamese twins of a couple of rats, and many other monstrosities. He exclaims, "it is a surprising spectacle to see a paw cut from one rat, live, grow, finish its ossification, and regenerate its nerves under the skin of another, and when we want a plume of feathers under the skin of a dog, what a miracle to see the interrupted vital phenomena resume their course, and the fragment of a bird receive nourishment from the blood of a mammal.—*Intellectual Observer.*

Deaths From Chloroform.—An inquest was held on Friday, June 24th, at King's College Hospital, on the body of Mrs. E. Ruth, aged 29, who died from the effects of the vapor of chloroform during an operation for removing a tumor in the urethra. A question arose as to the quantity administered to her on a former occasion, and the absence of books of reference in such cases in the hospital. The following verdict was returned:—"That the deceased died from the effects of the vapor of chloroform," and the jury expressed their opinion that proper case-books for reference should be kept in the hospital. Another fatal case occurred at Middlesex Hospital, on Tuesday, July 5th. This was an operation for the removal of a large tumor from the face, during which the patient died on the operating table. A third case occurred at St. Mary's Hospital, where an inquest was held on Monday, July 18th, on the body of James Birch, aged 56, who died while under the influence of chloroform, administered previous to an operation for the removal of the bone of the great toe. A *post mortem* showed extensive disease of the heart.—*London Phar. Jour.*

Charity Hospital Medical College.

Cleveland, Ohio.

FACULTY.

JAMES DASCOMB, M. D., Professor of Chemistry and Toxicology.
A. P. DUTCHER, M. D., Professor of Principles and Practice of Medicine.
L. FIRESTONE, M. D., Prof. of Obstetrics and Diseases of Women and Children.
J. H. SALISBURY, M. D., Prof. of Histology, Physiology Pathological Anatomy.
R. N. BARR, M. D., Prof. of Anatomy.
GUSTAV C. E. WEBER, M. D., Prof. of Civil and Military Surgery.
M. S. CASTLE, Esq., Prof. of Legal Medicine.
W. J. SCOTT, M. D., Prof. of Materia Medica.
A. METZ, M. D., Prof. of Ophthalmalogy.
S. M. SARGENT, M. D., Prof. of Diseases of the Urinary Organs.
J. C. SHENCK, M. D., Demonstrator of Anatomy.
GUSTAV C. E. WEBER, M. D., *Dean.* J. H. SALISBURY, *Secretary.*

This Institution is established on the same plan as the Bellevue Medical College of New York.

CLINICAL INSTRUCTION constitutes a prominent feature in this plan of Education. The lectures will commence on the 26th day of October, and continue 17 weeks. Professors' Tickets, $60. Matriculation Fee, $5. Graduation Fee, $20. Demonstrator's Ticket, $5. Hospital Ticket, $5.

Persons desiring further information can address the Dean or Secretary at Cleveland, Ohio. GUSTAV C. E. WEBER, M. D.,
Sep. & Oct. *Dean of the Faculty.*

Bellevue Hospital Medical College

CITY OF NEW YORK.

SESSION FOR 1864-65.

The Trustees and Faculty announce, with much gratification, the renewed evidence of success afforded by the session of 1863–64. The experience of the three sessions has furnished ample proof of the importance of the new movement in behalf of medical education inaugurated by this College.

FACULTY.

ISAAC E. TAYLOR, M. D., *President.*
AUSTIN FLINT, Jr., M. D., *Secretary.*

James R. Wood, M. D., Professor of Operative Surgery and Surgical Pathology.
Frank H. Hamilton, M. D., Prof. of Military Surgery, Fractures and Dislocations.
Lewis A. Sayre, M. D., Professor of Orthopedic Surgery.
Alexander B. Mott, M. D., Professor of Surgical Anatomy.
Stephen Smith, M. D., Professor of the Principles of Surgery.
Isaac E. Taylor, M. D.,
George T. Elliott, M. D.,
B. Fordyce Barker, M. D., } Professors of Obstetrics and the Diseases of Women and Children.
Benjamin W. McCready, M. D., Professor of Materia Medica and Therapeutics.
Timothy Childs, M. D., Professor of Descriptive and Comparative Anatomy.
Austin Flint, M. D., Professor of the Principles and Practice of Medicine.
R. Ogden Doremus, M. D., Professor of Chemistry and Toxicology.
Austin Flint, Jr., M. D., Professor of Physiology and Microscopical Anatomy.
Henry D. Noyes, M. D., Demonstrator of Anatomy.
George H. Humphreys, M. D., Assistant Demonstrator of Anatomy.
N. R. Moseley, M. D., Prosector to the Chair of Surgical Anatomy.
A. W. Wilkinson, M. D., Assistant to Chair of Chemistry and Toxicology.

PRELIMINARY TERM.

The preliminary term will commence on Wednesday, Sept. 14, 1864, and continue to the beginning of the regular term, viz., for four weeks.

Instruction during this term will consist of didactic courses on special subjects of interest and practical importance, together with daily clinical lectures. The college lectures during this term are given exclusively by members of the Faculty. Attendance during this term is not required, but students are earnestly solicited to attend; it being designed to make this term not merely a nominal, but an actual extension of the period of instruction.

REGULAR TERM.

The regular term will commence on Wednesday, Oct. 12, 1864, and end early in March, 1865.

During the whole of the session the student will have the opportunity of attending at least two clinical hospital lectures daily. In addition to these, four didactic lectures are given on every week-day except Saturday, in the college building within the hospital grounds. The didactic lectures are so arranged as not to interfere with hospital attendance. Ample time is allowed for accompanying the visiting Physicians, Surgeons, and Obstetricians of the hospital, attending clinical lectures, witnessing Surgical and Obstetrical operations, autopsies, etc., without compromising any of the courses of didactic instruction, the latter being as complete in this Institution as in Colleges not connected with hospitals. Clinical and demonstrative teaching constituting the great feature of this College, the arrangements are such as to render the immense resources of the hospitals available to the fullest extent.

All the lectures in this College are given either in the hospital or in the College building within the hospital grounds.

The Bellevue Hospital receives annually from ten to twelve thousand patients. The annual number of births in the hospital is about five hundred. The Blackwell's Island Hospital usually contains about one thousand patients, a large proportion being affected with chronic diseases. This hospital contains always several hundred cases of syphilis. In addition to the vast field of clinical instruction afforded by these hospitals, the student may avail himself of the other Institutions under the government of the Commissioners of Public Charities and Correction, together with the varied resources for practical instruction contained in the great Metropolis.

The facilities for the study of practical Anatomy are unlimited. Anatomical material is supplied free of expense.

The fees for tickets to all the lectures, during the Preliminary and Regular Terms amount to $105; tickets for one or any number of the seven departments of instruction may be taken out separately. The Matriculation Fee is $5. The Demonstrator's ticket is $5. Graduation fee is $30.

No other fees are required. The Hospital ticket is gratuitous, after Matriculation. Students who have attended two full courses in other accredited schools [Eclectic and Homœopathic schools are not accredited,] receive all the tickets for $50, exclusive of the Matriculation fee. Students who have attended two full courses in this College, or after one full course in this College, having previously attended a full course in some other accredited school, will be required to matriculate only. Graduates of other accredited schools, after three years, are required to matriculate only; prior to three years, they receive a general ticket for $50.

Payment of fees is required in all cases, and tickets must be taken out at the commencement of the session. There are no exceptions to this rule.

Twenty-two resident Physicians and Surgeons are appointed annually, after an examination and recommendation by the Medical Board of the Hospital. They receive a salary sufficient for their support.

Students on arriving in the city are requested to report at once to Bellevue Hospital, situated on the East River, between 26th and 28th streets, and inquire for the Janitor, Mr. Edwin A. Ware who will take pains to aid them in securing comfortable accommodations, without delay.

For Circulars of the College, giving fuller information, etc., address the Secretary of the Faculty, Professor Austin Flint, Jr., 257 Fourth Avenue. Aug.

Just Published. Price 50 Cents.

THE NERVOUS AND VASCULAR CONNECTION BETWEEN

The Mother and Fœtus in Utero.

BY JOHN O'REILLY, M. D., F. R. C. S. I.

BAILLIERE BROS., 520 Broadway. WOOD, 61 Walker St., N. Y.

NOTICES.

"He has handled the subject ably and most scientifically."—*Prof. Mott's Surgical Lectures, N. Y. University, Feb.*, 1864.

"In fact the subject should have been written upon long ere this, and as it is, the profession are under a deep debt of gratitude to Dr. O'Reilly for having afforded them a key to unlock the mysteries of nature."—*Prof. Budd's Lectures on Obstetrics, N. Y. University, Feb.*, 1864.

"You have opened up a field of observation which can not fail, in your hands to lead to most important results."—*William A. Hammond, Surgeon-General, U.S.A.*

"The author's views are clearly stated, his arguments, if not demonstrative, are at least ingenious, his conclusions logical, and will well repay the time devoted to their study."—*Chicago Medical Journal.*

"This work consists of an ingenious argument to show that there is a nervous connexion between the Mother and Fœtus in Utero. Facts illustrative and demonstrative are introduced, and the philosophy of mental impressions being conveyed to the Fœtus in Utero by the Mother is presented according to the original and enlightened views of the author. It is impossible to give our readers any very satisfactory resume of the arguments presented, or the opinions entertained by Dr. O'Reilly. He has studied this subject with great care, and is explaining facts which have been hitherto stupidly denied, because they could not be satisfactorily explained. Physicians who deny that mental impressions made upon the mother can be conveyed to the fœtus in utero, are especially invited to read this book; they will see that there are '*some stranger things than dreampt of in their philosophy.*' We have been deeply interested in the perusal of the book, and though perhaps all the positions are not yet fully established, yet the originality, philosophy, and perspicuity of the work commend it to the careful consideration of all."—*Buffalo Medical and Surgical Journal.*

"The quotation from St. Luke is very adroit, in fact it is sublimely apropos; it is worth whole volumes of demonstrative material from other sources."—*John Shanks, M.D., N. Y.*

"With his characteristic originality and ingenuity, Dr. O'Reilly labors to prove that there is a nervous connexion by which impressions are conveyed from the mother to the fœtus in utero, a doctrine ignored by a large portion of the medical profession. .... Yet, however sceptical we may be on this point, we have been deeply interested in the perusal of the book, and commend it to the consideration of our readers."—*American Medical Times, N. Y.*

"It would be useless in our limited space to attempt to make any argument for or against the theory broached herein; still less to express a bold opinion respecting the correctness or the contrary of the deductions made by the erudite author. But we should do great wrong did we not recognize the research, industry, and originality so evident in its pages, and without expressing an opinion upon this *questio vexata*, to acknowledge the valuable facts collected, and the bold reasoning upon them."—*New York Medical Independent.*

"We think Dr. O'Reilly is correct when he asserts that vitality has its seat in the organic nervous system."—*Cincinnati Lancet and Observer.*

"The same may be said with regard to his opinion of the direct vascular connexion.

"We find, indeed, that Dr O'Reilly's views on many subjects differ from those generally held, and none more so than that the seat of life is located in the sympathetic nerves and ganglia.

"Altogether the work is highly interesting, and has given us some food for thought and much amusement with its curious stories and more curious illustrations. We recommend it as a treat to our readers."—*Canada Lancet.* Aug.—2t